Electronic Version
Stylesheet Version v1.1.1

Description

[*DUMBBELL SADDLE*]

BACKGROUND OF INVENTION

[0001] Field of the Invention

[0002] This invention relates to a saddle for a dumbbell. More particularly the invention relates to a saddle that is easy to manufacture and does not mar a dumbbell which is placed inside it. This invention also relates to a rack having complementary non-marring saddles.

[0003] Description of Related Art

[0004] Dumbbell racks and the saddles associated with them that are found in the market have several problems associated with them. Racks, in order to be strong, are generally made of steel or some other metal. For the same reason, the saddles are made of metal as well. In fact, in the present market, a separate piece of iron or steel is placed at an angle on the rack to keep a dumbbell from falling off of the rack. It may or may not be attached to a rounded saddle for the dumbbell. This piece may be sharp and in-

jure a person as they remove or replace a dumbbell. In the current designs, the dumbbell is placed on a metal saddle on an angle to prevent the dumbbell from falling off the rack. When the metal saddle hits the dumbbell, the dumbbell becomes damaged over use. Thus, the saddles of the present art mar the surface of the dumbbell. This is especially distressing where the dumbbells have a high gloss finish, such as chrome or another highly reflective material.

[0005] Furthermore, the metal on metal contact between the saddle and the means for attaching the saddle to a rack can mix with ambient moisture or a person"s sweat, causing the saddle, rack and even the dumbbell to rust easily. The rust is unsightly, and in fact may be a health hazard.

[0006] Moreover, in the racks in the present art, there is a single point of attachment between the saddle hand the rack. After a period of time, this single point of attachment gets worn. And the saddle tends to rattle and/or spin. The rattling eventually causes additional wear and causes the saddle to bet in improper orientation for receipt of a dumbbell.

[0007] The present art in saddles and dumbbell racks is therefore deficient and may not be entirely healthy and sanitary.

Thus, there is a need for a saddle which will not expose a person using dumbbells to rust. There also exists a need for a saddle which will not mar a dumbbell. There also exists a need for a dumbbell saddle which securely attaches to a rack with multiple attachment points. There also exists a need for a means for attaching the saddle to a rack which is encased in a non-marring material to serve a dual purpose of securely attaching a means for attaching the saddle to a rack to the saddle itself, while simultaneously reducing the chance of rust on the means for attachment.

[0008] The saddle is designed to be applied to a dumbbell rack that has the need for a saddle to support the dumbbell when not in use. It is a self contained saddle preferably made of steel or cast iron and encased by virgin rubber. It is attached with two means for attachment such as bolts to prevent the saddle from coming loose from the rack or spinning after use. Dumbbells that are stored on the present saddle will be protected against damage. With the design described herein there is no bolt showing through the saddle to attach it to the rack. Other designs have a bolt through the saddle and will rust almost immediately from perspiration from the user and/or ambient moisture.

Since no angle iron is required to hold the dumbbell in place, the user will not have to worry about hitting their hand on any sharp object when placing or removing the dumbbell in and out of the saddle. Also, the design described herein is a unique self-contained saddle that protects the dumbbells that rest inside them.

[0009] Dumbbell racks having saddles currently use a section of angle iron or steel that a saddle is attached and bolted onto. The bolt goes in from the top and attaches with a nut. After a period of time, the saddle rotates. The bolt also begins to rust from the perspiration from the user. The dumbbell rests on the angle steel or iron causing damage to the dumbbell when removing and adding to the rack. The present saddle allows the dumbbell to rest on a rubber surface thereby preventing contact with metal. Thus, the dumbbell is not damaged. The new saddle also attaches with two bolts to prevent it from rotating. Furthermore, the present design is easy to manufacture.

SUMMARY OF INVENTION

[0010] It is an object of the present invention to provide a saddle that reduces the risk of injury to a person removing or replacing a dumbbell.

[0011] It is another object of the invention to provide a saddle for a dumbbell that reduces the chances of marring, scratching or other damage over time.

[0012] It is a further object of the invention to provide a saddle that will reduce the chances of rust on a saddle, rack and/or metal dumbbell.

[0013] It is an additional object of the invention to provide a saddle that is securely attached to a rack, preferably by multiple attachment points, thereby preventing a saddle from rattling or spinning and being in an improper orientation for receipt of a dumbbell.

[0014] It is yet another object of the invention to provide a saddle that reduces the exposure of a head of a means for attachment of the saddle to a rack to air and moisture.

[0015] In accordance with these and other objects, the present invention generally comprises an easy-to-manufacture protective saddle for a dumbbell, comprising a generally U-shaped member, having a curved element having a top surface, a base portion, and an inner end, and a generally vertical element having an upper end and an interior end attached to said inner end of the U-shaped member, wherein a non-marring surface for providing contact with a dumbbell to be placed on the saddle is located on said

U-shaped member. A plurality of means for attachment of the saddle to a frame located in said base portion. The non-marring surface is unitary in construction.

[0016] For the manufacture of the saddle, the surface is injection molded or sprayed onto the U-Shaped member. The means for attachment include an elongated attachment member located in a complementary void in the base portion, and each attachment member is adapted for use in a complementary cavity in said frame. The means for attachment may preferably be securely connected to the base portion.

[0017] The vertical member of the saddle has a divot for accommodating a handle on said dumbbell. The surface may be a material such as polyurethane, thermosetting plastic and/or virgin rubber .

[0018] The method for forming the saddle comprises the steps of forming a core having a generally U-shaped member, placing means for attachment through the voids in the U-shaped member whereby means for attachment extend below the base, and forming a non-marring surface for providing contact with a dumbbell to be placed on the saddle located at least on a top portion of the U-shaped member and on the interior end of the vertical element.

[0019] The step of forming comprises the steps of placing the core at least partially within a mold and placing a substance which forms a non-marring surface into the mold and around the core, whereby at least a portion of the means for attachment is not covered in the substance. The means for attachment are securely connected to the base portion before the core is placed in a mold. The means for attachment preferably comprise a threaded bolt. The substance is preferred to be a rubber that adheres to the core.

[0020] The invention is also a frame for a plurality of dumbbells, comprising a plurality of pairs of saddles oriented to accommodate each weight on a dumbbell, each saddle comprising a generally U-shaped member, wherein a non-marring surface for providing contact with a dumbbell to be placed on the saddle is located on said U-shaped member. The frame preferably further comprises a plurality of means for attachment of the saddle to a frame located in said base portion. Also, the frame comprises complementary holes for means for attachment.

[0021] In accordance with these and other objects which will become apparent hereinafter, the instant invention will now be described with particular reference to the accompany-

ing drawings.

Brief Description of Drawings

[0022] Figure 1 shows a perspective view of the frame of the invention.

[0023] Figure 2 shows a cut away perspective view of the frame of the invention.

[0024] Figure 3 shows a perspective view of the saddle of the invention before placement of a non-marring surface.

[0025] Figure 4 shows a side plan view of the saddle of the invention before placement of a non-marring surface.

[0026] Figure 5 shows a perspective view of the saddle of the invention with the means for attachment in place before placement of a non-marring surface.

[0027] Figure 6 shows a side plan view of the saddle of the invention with the means for attachment in place before placement of a non-marring surface.

[0028] Figure 6A shows a top plan view of the saddle of the invention with the means for attachment in place before placement of a non-marring surface.

[0029] Figure 7 shows a perspective view of the saddle of the invention with the means for attachment in place after placement of a non-marring surface.

[0030] Figure 9 shows a top plan view of the saddle of the inven-

tion.

[0031] Figure 10 shows a side cutaway view of the saddle of the invention through the vertical element.

[0032] Figure 11 shows a side cutaway view of the saddle of the invention through the curved element of the invention.

Detailed Description

[0033] With reference to the drawings, Figures 1-11 depict an easy to manufacture protective saddle for a dumbbell generally depicted by the numeral 10. Throughout the figures, like referenced characters are used to indicate like elements. Referring now to Figures 1, 2 and 7, the saddle of the present invention is shown. The saddle generally comprises a generally U-shaped member 12. The member 12 includes a curved element 13 having a top surface 15, a base portion 16, and an inner end 17. The member also has a generally vertical element 19 having an upper end 14 and an interior end 18 attached to said inner end 17 of the curved element 13. A non-marring surface 28 for providing contact with a dumbbell (not shown) to be placed on the saddle is on the outer surface of the U-shaped member 12.

[0034] In the preferred embodiment, the saddle 10 also includes a plurality of means for attachment of the saddle to a

frame, shown at element 24 in Figure 5, located in the base portion 16. As shown, two means for attachment are used, however, three or more means for attachment are also contemplated.

[0035] It is preferred that the non-marring surface is unitary in construction, and that the surface is injection molded onto the U-Shaped member 10. However, the surface may alternatively be sprayed upon the U-shaped member or placed on the surface by other equivalent means.

[0036] It is also preferred that the means for attachment 24 comprise an elongated attachment member as shown in Figure 5. The elongated member is placed in a complementary void 22 in said base portion 16. The attachment members are preferably adapted for use in a complementary cavity in a frame, shown generally as reference number 100 in Figure 1. The means for attachment is preferably a threaded bolt having a head 26 preventing the bolt from massing through the corresponding void 22. The bolt may be securely connected to the base portion by means such as welding or an adhesive. In yet another alternative embodiment, the means for attachment to a frame are made an intrinsic part of the base and may be formes simultaneously with the base.

[0037] The bolt may be attached to the frame with a nut, the use of a locking washer would prevent inadvertent disconnection of the saddle 10 from the frame 100.

[0038] As shown in the accompanying figures, it is also preferred that the vertical element 19 further comprises a divot 20 for accommodating a handle on a dumbbell.

[0039] The preferred non-marring surface is polyurethane, and the curved element and the vertical element are preferably stainless steel or another strong, chemically resistive material.

[0040] The preferred method for forming the saddle 10 comprises the following steps. First, the step of forming the U-shaped member core is taken. The core includes the curved element having a top surface, a base portion, and an inner end and the generally vertical element having an upper end and an interior end attached to said inner end of the U-shaped member described above. The curved element and the vertical element may be fabricated together or they may be made separately and attached through welding, adhesives or other equivalent means.

[0041] A plurality of voids is then formed through the base portion. The voids may be pre-formed with the core or may be drilled through the base portion after the core is

formed. Means for attachment are then placed through the voids whereby means for attachment extend below the base.

[0042] A non-marring surface for providing contact with a dumbbell to be placed on the saddle located is then formed at least on a top portion of the U-shaped member and on the interior end of the vertical element.

[0043] Preferably, the step of forming the non-marring surface comprises the steps of placing the core at least partially within a mold and placing a substance which forms a non-marring surface into the mold and around the core, whereby at least a portion of the means for attachment is not covered in the substance. It is preferred that the means for attachment are securely connected to the base portion before the core is placed in a mold for placing rubber or plastic over the core. The addition of rubber or plastic in the mold may sufficiently secure the means for attachment for the purposes of the invention. The preferred rubber is virgin rubber or its equivalent. One plastic that may be used is a thermosetting plastic or its equivalent.

[0044] In the preferred method of placing the non-marring surface over the core, the saddle is preferably placed in a

mold so that the means for attachment are at least partially outside the mold. Thus, the entire core is covered with the non-marring material. It is preferred that a rubber able to adhere to the core is placed in the mold; however, plastic may also be used. In the preferred embodiment, at least those portions of the core likely to touch a dumbbell are covered by the non-marring surface. Also, it is preferred that the non-marring surface is generally rounded to conform with the shape of a dumbbell placed in it. As shown in Figure 2, depressions 30 may be formed in the non-marring surface to ease removal of the saddle from the mold. Thus, in the preferred embodiment, when the core is released from the mold, rubber is encased over the saddle leaving the top of the bolts encased and the threads exposed for attaching to the rack.

[0045] The means for attachment are preferred to be a threaded bolt; however, other means for attachment, such as clamps and clips or the equivalent may also be used.

[0046] Moreover, the saddles may be placed in complementary pairs on a frame 100 as shown in Figures 1 and 2. In the preferred embodiment, each saddle 10 of a complementary pair is placed on a separate rail 32 of the frame 16. Several saddle pairs are preferably placed side by side.

The frame 100 also preferably includes leggings 34 so that two or more tiers of rails 32 may be used on a frame.

[0047] A nut, preferably with a locking washer, is used on each means for attachment. The multiple means for attachment on each saddle decrease the chances of the saddle rattling on the frame. The fact that the means for attachment are placed on the saddle so that no portion of the means for attachment touches the dumbbell when properly placed in the saddle reduces the chances of scratching the dumbbell. Furthermore, the fact that the means for attachment is covered by the non-marring surface reduces the chance of oxidation of the means for attachment as well as the base portion of the saddle.

[0048] Although a frame having one side of layered rails is shown in Figure 1, other orientations, such as triangular or round configurations are also contemplated herein.

[0049] Thus, the invention further comprises an easy-to-manufacture frame for a plurality of dumbbells, including a plurality of pairs of saddles oriented to accommodate each weight on a dumbbell. Each saddle comprises a generally U-shaped member, including a curved element having a top surface, a base portion, and an inner end and a vertical element having an upper end and an

interior end attached to said inner end of the U-shaped member. A non-marring surface for providing contact with a dumbbell to be placed on the saddle is located on the U-shaped member.

[0050] The frame may preferably further comprise a plurality of means for attachment of the saddle to a frame located in said base portion. Also, each saddle preferably comprises a plurality of means for attachment located at said base portion.

[0051] The instant invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized, however, that departures may be made therefrom within the scope of the invention and that obvious modifications will occur to a person skilled in the art.